Operators Manual

Hose Reel 2250

S.N. 1548-01 -

DRYAIR Manufacturing Corp.
400 Service Road, PO Box 126
St. Brieux, SK, Canada
S0K 3V0
Tel: (306) 275-4848 1-888-750-1700
Fax: (306) 275-4664

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Warranty Policies & Claim Procedures

DRYAIR Inc. (referred to within as DRYAIR) warranties its new, unused equipment to be free of defects in material and workmanship at the time of delivery to the first retail purchaser.

Warranty Policies

Basic warranty policy

- DRYAIR will repair or replace, at its option, without charge, any defective part of the equipment for a period of twelve (12) months from delivery to the first retail purchaser, F.O.B St. Brieux, SK, Canada .
- Mileage is not covered. Any parts that are covered by an extended warranty published by DRYAIR are an exception to the Basic Warranty policy and are to be warranted as per the details of the Extended Warranty Policy.
- Labor is covered as per DRYAIR flat labor rate.
- The Warranty Policy, terms and conditions, may change from time to time without prior notice.
- Warranty terms and conditions are transferable in the event of the sale to a second owner.
- Replacement parts will be warranted for 90 days from the repair date. Bill of sale must accompany the warranty claim.

Extended warranty policy

Water heater heat exchanger

- An extended warranty is available on the heat exchanger unit of the water heater assembly. The available warranty for a part, under the extended warranty policy, is prorated by 20% per year.
- (Shipment date is the date to be used for the commencement of the warranty period).
- Coverage schedule
  - Year 1 - 100%
  - Year 2 - 80%
  - Year 3 - 60%
  - Year 4 - 40%
  - Year 5 - 20%

Exceptions to the warranty policies

- Under no circumstance shall the owner be entitled to recover costs for incidental, special or consequential damages such as, but not limited to: loss of profit or revenue, other commercial losses, inconvenience and/or replacement equipment rental cost.
- Maintenance, repair or service items not related to warrantable defects.
- Loss or damage during shipping.
- Failure resulting from lack of or improper maintenance.
- Damage caused by operator abuse, negligence or improper operation.
- Damage resulting from improper voltage supply.
- Damage from improper installation. Installation done by other than the manufacturer.
- Non-defective items replaced at the request of the customer.
- Damage due to accidents.
- Damage resulting from improper fuel supply (i.e. pressure or contamination).
- Damage resulting from cracked or broken lines occurring during transport.
- Damage resulting from use of inadequate or improper fluids (i.e.. glycol or oil).

Owners obligations

- It is the responsibility of the owner, at the owner's expense, to transport the equipment to the service facility of an authorized DRYAIR distributor/dealer or alternately to reimburse the distributor/dealer, for any traveling expenses incurred in fulfilling this warranty.
- The terms of this Warranty Policy are subject to provincial and state legislation. DRYAIR reserves the right to make modifications in accordance with provincial and state legislation without prior notice or obligation.
- It is the responsibility of the owner to read, understand and implement the maintenance, safety and operational guidelines as laid out in the Operation and Maintenance Guide.
- All parts to be tagged with warranty claim number and shipped prepaid to DRYAIR within 30 days.

Manufacturer obligations

- DRYAIR reserves the right to continually improve and/or change the product's parts or specifications at any time without notice or obligation.
- The terms of this Warranty Policy are subject to provincial and state legislation. DRYAIR reserves the right to make modifications in accordance with provincial and state legislation without prior notice or obligation.

Warranty Claim Procedure

- All warranty credits must be processed with the DRYAIR Warranty Claim Form.
- All warranty parts, unless otherwise specified, are to be returned to DRYAIR along with a completed Warranty Claim Form.

  Note: Prior to returning warranty parts, please call for an authorization number and shipping instructions from the Warranty Department in Canada.
- Location of Warranty Depot：

  DRYAIR Manufacturing Corp.
  400 Service Road, PO Box 126
  St. Brieux, SK, Canada
  S0K 3V0
  Ph. 1 (888) 750-1700

- Each warranty claim should only refer to one Serial or Production Schedule numbered unit.
- Warranty parts are to be tagged with warranty claim number.
- When claiming for warranty labour, the allowable warranty labour rate will be $45.00/hour. The factory reserves the right to adjust the number of hours claimed where deemed necessary.
- The factory may at times specify allowable labour for certain warranty procedures.
- Mileage and travel time, to and from the customer are not eligible for warranty credit.
- Freight charges for warranty parts are not eligible for warranty credit.
- Labour flat rates for component changes

  Electrical components - .5 hour

  Plumbing components - 1 hour

  Electric motor changes - 1 hour

  Note: Other labour charges will be at the discretion of DRYAIR.

Safety Concerns

General Safety Guidelines

- Make certain that the operator reads and understands all the information in this manual.
- All unauthorized people must be kept away from the equipment when in operation.
- Maintain instructional and safety decals. Replace damaged decals.
- All guards must be in place when the equipment is in operation**.**

Water Heater Module

CAUTION! The water heater is a heating appliance.

- When dealing with any heating appliance, observe all posted warnings and cautions.
- Keep children and pets away from all piping and fuel accessories.
- The water heater housing panels must be kept closed when the system is operating. This prevents drafts from affecting water heater operation.

Heat Transfer Fluid

Follow the following precautions and measures when working with "heat transfer fluid" ("DOWFROST* HTF" & "BOSS CHILL PG").

Fluid handling precautions

- Ventilation ..... Good general ventilation should be sufficient for most conditions.
- Respiratory protection . No respiratory protection should be needed.
- Skin protection ..... For brief contact, no precautions other than clean body-covering clothing should be needed.
  ..... Use impervious gloves when prolonged or frequently repeated contact should occur.
- Eye Protection ..... Use safety glasses.

First aid measures

- Eyes ..... Flush eyes with plenty of water.
- Skin ..... Wash off in flowing water or shower.
- Ingestion ..... Induce vomiting if large amounts are ingested.
  ..... Consult medical personnel.
- Inhalation ..... Remove to fresh air if effects occur.
  ..... Consult a physician.
- Note to physician ..... No specific antidote.
  ..... Supportive care.
  ..... Treatment based on judgment of the physician in response to reactions of the patient.

For complete "heat transfer fluid" information, refer to the Material Safety Data Sheets for "Dowfrost HTF" & "Boss Chill PG" on the following page.

Material Safety Data Sheet

BOSS CHILL PG
MSDS

Canadian Centre for Occupational Health and Safety

Issue: 2001-4 (November, 2001)

MATERIAL SAFETY DATA

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME: ..... PROPYLENE GLYCOL INDUSTRIAL
PRODUCT CODE: 70511
EFFECTIVE DATE: ..... 05/23/03 DATE PRINTED 10/09/03 MSD: 000248
COMPANY IDENTIFICATION: ..... The Dow Chemical Company, Midland, MI 48674
EMERGENCY TELEPHONE NUMBER: . 24-HOUR EMERGENCY PHONE NUMBER 989-636-4400
..... Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Propylene glycol CAS# 000057-55-6 99%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: ..... Colorless, odorless liquid. Toxic fumes released in fire situations.
POTENTIAL HEALTH EFFECTS: ..... (See Section 11 for toxicological data.)
EYE: ..... May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Mists may cause eye irritation.
SKIN: ..... Prolonged contact is essentially nonirritating to skin. A single prolonged skin exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated exposures may cause flaking and softening of skin. May be absorbed in potentially harmful amounts when applied in large quantities to severe burns (second or third degree) over large areas of the body as part of a cream or other topical application. Absorption under such circumstances can elevate serum osmolality and may result in osmotic shock.
INGESTION: ..... Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.
INHALATION: ..... At room temperature, vapors are minimal due physical properties. Mists may cause irritation of upper respiratory tract.
SYSTEMATIC: ..... (OTHER TARGET ORGAN) EFFECTS: Repeated excessive ingestion may cause central nervous system effects.
CANCER INFORMATION: ..... Did not cause cancer in long-term animal studies.
TERATOLOGY (BIRTH DEFECTS): ..... Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus.
REPRODUCTIVE EFFECTS: ..... In animal studies, has been shown not to interfere with reproduction.

4. FIRST AID

EYE: ..... Flush eyes with plenty of water.
SKIN: ..... Wash off in flowing water or shower.
INGESTION: ..... No adverse effects anticipated by this route of exposure incidental to proper industrial handling.
INHALATION: ..... Remove to fresh air if effects occur. Consult a physician
NOTE TO PHYSICIAN: ..... No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

FLASH POINT: .....218°F, 103°C
METHOD USED: .....PMCC
FLAMMABLE LIMITS.....LFT: 2.6%
LFL: 2.6%
UFL: 12.5%

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to: aldehydes, carbon monoxide.

OTHER FLAMMABILITY INFORMATION: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

EXTINGUISHING MEDIA: Water fog or fine spray, carbon dioxide, dry chemical, foam. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Do not use direct water stream. Will spread fire.

MEDIA TO BE AVOIDED: Do not use direct water stream.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (including fire-fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURE (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Isolate area.

PROTECT THE ENVIRONMENT: Contain liquid to prevent contamination of soil, surface water or ground water.

CLEANUP: For small spills, clean up with absorbent material. Collect material in suitable and properly labeled open containers. For large spills, dike and pump into suitable and properly labeled containers.

7. HANDLING AND STORAGE

HANDLING: Product handled hot may require additional ventilation or local exhaust. Product on surfaces can cause slippery conditions.

STORAGE: Keep containers tightly closed when not in use. Store in stainless steel, aluminum, Plasite 3066 lined containers or 316 stainless steel. Store below 121°C, 250° F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use safety glasses. Safety glasses should be sufficient for most operations; however, for misty operations wear chemical goggles.

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. Use impervious gloves when prolonged or frequently repeated contact could occur.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiration protection is required for certain operations, use an approved air-purifying respirator. In misty atmospheres, use an approved mist respirator.

EXPOSURE GUIDELINE(S): Propylene glycol: AIHA WEEL is 50 ppm total, 10 mg/m3 aerosol only.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: ..... Colorless liquid
ODOR: ..... Odorless
VAPOR PRESSURE: ..... 0.08 mmHg @ 20°C, 68°F
VAPOR DENSITY: 2.62
BOILING POINT: ..... 370°F, 188°C
SOLUBILITY IN WATER: .... Complete
SPECIFIC GRAVITY: ..... 1.038 @ 20/20°C, 68°F

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: Avoid temperatures above 121°C/250°F. Product can decompose at elevated temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: When available oxygen is limited, as in a fire or heated to very high temperatures by hot wire or plate, carbon monoxide and other hazardous compounds such as aldehydes might be generated.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in section 1)

SKIN: the LD50 for skin absorption in rabbits is greater than 10,000 mg/kg.

INGESTION: The oral LD50 for Female rats is about 20,000-34,000mg/kg.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Results of in vitro (test tube) mutagenicity tests have been negative. Results of mutagenicity tests in animals have been negative.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

ENVIRONMENTAL FATE

MOVEMENT AND PARTITIONING: Based largely or completely on information for similar material(s), i.e. propylene glycol. Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Log octanol/water partition coefficient (log Pow) is -0.92. Henry's Law Constant (H) is 1.2E-8 atm.m3/mole.

DEGRADATION AND PERSISTENCE: Based largely or completely on information for similar material(s), i.e. propylene glycol. Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). Biodegradation is expected to be achieved in a secondary waste-water treatment plant. 5-Day biochemical oxygen demand (BOD5) is 1.16 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.45 p/p. Theoretical oxygen demand (ThOD) is calculated to be 1.68 p/p. Inhibitory concentration (IC50) in OECD Activated Sludge Respiration Inhibition Test (OECD Test No. 209) is greater than 1gm/L. Degradation is expected in the atmospheric environment within minutes to hours.

ECOTOXICITY: Based largely or completely on information for similar material(s), i.e. propylene glycol. Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species).

Acute LC50 for fathead minnow (Pimephales promelas) is 46500-54900 mg/L.

Acute LC50 for guppy (Poecilia reticulata) is greater than 10000 mg/L.

Acute LC50 for water flea Daphnia magna is 4850-34400 mg/L.

Acute LC50 for rainbow trout (Oncorhynchus mykiss) is 44 ml/L (about 44000 mg/L).

13. DISPOSAL CONSIDERATION (See Section 15 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESS OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information on Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or waste water treatment system.

As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Centre at 800-258-2436 or 989-832-1556 for further details.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORT:
This product is not regulated by D.O.T. when shipped domestically by land
CANADIAN TDG INFORMATION:
For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or your Dow representative.

15. REGULATORY INFORMATION (Not meant to be all-inclusive—selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specified information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATION

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: Not to have met any hazard category.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

REGULATORY INFORMATION:

CHEMICAL NAME	CAS NUMBER	LIST
1, 2-PROPANEDIOL	00057-55-6	PA1

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) classification for this product is: This product is not a "Controlled Product" under WHMIS.

16. OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	0
Flammability	1
Reactivity	0

MSDS STATUS: Revised Section 16.

Material Safety Data Sheet

DOWFROST* HEAT TRANSFER FLUID
MSDS

Canadian Centre for Occupational Health and Safety

Issue: 05/09/2002

Received: 09/10/2003

MATERIAL SAFETY DATA

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME: ..... DOWFROST* HEAT TRANSFER FLUID
MSDS#: 1376
EFFECTIVE DATE: 05/09/2002
COMPANY IDENTIFICATION: ..... The Dow Chemical Company
..... Midland, MI 48674
EMERGENCY TELEPHONE NUMBER: . 24-HOUR EMERGENCY TELEPHONE NUMBER: (989)636-4400
..... Customer Information Number: 1-800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Propylene glycol	CAS# 000057-55-6	> 99%
Demineralized water	CAS# 007732-18-5	< 5%
Dipotassium hydrogen phosphate	CAS#007758-11-4	< 5%

3. HAZARDS DENITRIFICATION

EMERGENCY OVERVIEW: ..... Colorless, liquid, mild odor. No significant hazards for emergency response are known.
POTENTIAL HEALTH EFFECTS ..... (See Section 11 for toxicological information and additional information about potential health effects.)

EFFECTS OF SINGLE ACUTE OVEREXPOSURE

INHALATION: ..... At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).
EYE CONTACT: ..... May cause slight temporary eye irritation. Corneal injury is unlikely.
SKIN CONTACT: ..... Prolonged contact is essentially nonirritating to skin. Repeated contact may cause flaking and softening of skin.
SKIN ABSORPTION: ..... Prolonged skin contact is unlikely to result in absorption of harmful amounts.
SWALLOWING: ..... Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts

POTENTIAL ENVIRONMENTAL EFFECTS (See Section 12 for Ecological Information)

4. FIRST AID

INHALATION: ..... Move person to fresh air; if effects occur, consult a physician.
EYE: ..... Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effect occur, consult a physician, preferably an ophthalmologist.
SKIN: ..... Wash skin with plenty of water
INGESTION: ..... No emergency medical treatment necessary.
NOTE TO PHYSICIAN: ..... No specific antidote. Treatment of exposure should be directed at the control of symptoms and the condition of the patient.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES (Refer to section 9, PHYSICAL AND CHEMICAL PROPERTIES)

EXTINGUISHING MEDIA: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

FIRE FIGHTING PROCEDURES: Keep people away. Isolate fire area and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from a protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (including fire-fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Liquid mist of this product can burn. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

6. ACCIDENTAL RELEASE MEASURE

SMALL SPILLS: Absorb with materials such as: cat litter, sawdust, vermiculite, Zorb-all. Collect in suitable and properly labeled containers.

LARGE SPILLS: Dike area to contain spill. Recover spilled material if possible. See Section 13, Disposal Considerations for additional information.

PERSONAL PRECAUTIONS: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

ENVIRONMENTAL PRECAUTIONS: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. HANDLING AND STORAGE

HANDLING

GENERAL HANDLING: See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

OTHER PRECAUTIONS: Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

STORAGE: 121°C (250° F). Do not store in: galvanized steel.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE LIMITS

COMPONENT	EXPOSURE LIMITS	SKIN FORM
Propylene glycol	10mg/m3 TWA8 AIHA WEEL	Aerosol
	50 ppm TWA8 AIHA WEEL	Total Particulate fume

In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

PERSONAL PROTECTION

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline.

PROTECTION: When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator.

EYE PROTECTION: Use safety glasses.

OTHER PROTECTIVE EQUIPMENT: No precautions other than body-covering clothing should be needed. Use gloves chemically resistant to this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: ..... Liquid
APPEARANCE: ..... Colorless
ODOR: ..... Mild
FLASH POINT - Closed Cup: 102°C 216°F Tag closed cup ASTM D 56 (Propylene glycol)
FLAMMABLE LIMITS IN AIR:Lower 2.6%(V) 100°C (Propylene glycol)
..... Upper 12.5%(V) 130°C (Propylene glycol)
AUTOIGNITION TEMP: ..... 416°C 780°F
VAPOR PRESSURE: ..... 0.7 mmHg @ 20°C, 68°F
BOILING POINT (760 mmHg): 162°C 323°F
VAPOR DENSITY (air=1): 2.6
SPECIFIC GRAVITY (H2O=1):1.05 20°C/20°C
FREEZING POINT: ..... <=-51°C <=-60°F
MELTING POINT: ..... *Not applicable (for liquids)*
SOLUBILITY IN WATER (by weight): 100% 20°C
pH: ..... 9-11 (5% solution in water)
EVAPORATION RATE (Butyl Acetate=1): 0.07
PERCENT VOLATILES: ..... 98 Wt%

10. STABILITY AND REACTIVITY

STABILITY/INSTABILITY: Thermally stable at recommended temperatures and pressures.

CONDITIONS TO AVOID: Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

INCOMPATIBLE MATERIALS: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

THERMAL DECOMPOSITION: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Alcohols. Ethers.

HAZARDOUS POLYMERIZATION: Will not occur

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Peroral: Rat; female; LD50 = 20300 mg/kg

Percutaneous: Based on information for a similar material:

Rabbit; LD50 = > 10000 mg/kg

DEVELOPMENT TOXICITY: Contains component(s) which did not cause birth defects or any fetal effects in lab animals., The component(s) is/are:, Propylene glycol.

REPRODUCTIVE TOXICITY: Contains component(s) which did not interfere with reproduction in animal studies., Contains component(s) which did not interfere with fertility in animal studies., The component(s) is/are:, Propylene glycol.

CHRONIC TOXICITY AND CARCINOGENICITY: Similar formulations did not cause cancer in laboratory animals.

GENETIC TOXICOLOGY:

In Vitro: In Vitro mutagenicity studies were negative.

In Vivo: Mutagenicity studies in animals were negative for component(s) tested

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS: In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: Based largely or completely on information for: Propylene glycol. Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Degradation is expected in the atmospheric environment within minutes to hours.

ECOTOXICITY: Based largely or completely on information for: Propylene glycol. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 . 100mg/L in most sensitive species tested).

FURTHER INFORMATION: Based largely or completely on information for: Propylene glycol. Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Potential for mobility in soil is very high (Koc between 0 and 50).

13. DISPOSAL CONSIDERATION (See Section 15 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESS OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information on Ingredients). FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destructive device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Centre at 1-800-258-2436 or 0-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

14. TRANSPORT INFORMATION

NON-BULK Proper Shipping Name: NOT REGULATED
BULK Proper Shipping Name: NOT REGULATED

The information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transportation organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION (Not meant to be all-inclusive—selected regulations represented)

FEDERAL/NATIONAL

OSHS Hazard Communication Standard
This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right To Know Act) Section 313
To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right To Know Act) Section 302
To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right To Know Act) Section 311 & 312

Delayed (Chronic) Health Hazard:	NO
Fire Hazard:	NO
Immediate (Acute) Health Hazard:	NO
Reactive Hazard:	NO
Sudden Release of pressure Hazard:	NO

Toxic Substance Control Act (TSCA)
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

CEPA - Domestic Substances List (DSL)
All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

European Inventory of Existing Commercial Chemical Substances (EINECS)
The components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.

STATE/LOCAL

Pennsylvania (Worker and Community Right To Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:
The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

COMPONENT	CAS#	AMOUNT
Propylene glycol	57-55-6	96.0000 %

Pennsylvania (Worker and Community Right To Know Act): Pennsylvania Special Hazardous Substances List:
To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects of other reproductive harm, at levels which would require a warning under the statute.

California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Material Containing Organic Solvents).
VOC: Vapor pressure 0.66 mmHg @ 20°C
1002 g/l VOC
1030 g/l less water and less exempted solvents

This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

16. OTHER INFORMATION

ADDITIONAL INFORMATION

Additional information on this and other Dow products may be obtained by visiting our web page at www.dow.com.
Additional information on this product may be obtained by calling Dow's Customer Information Group at 1-800-258-2436 (U.S.) or 1-800-331-6451 (Canada).

HAZARD RATING SYSTEM

NFPA rating for this product are: H - 0 F - 0 R - 0
The ratings are part of a specific hazard communication program and should be disregarded where individuals are not trained in the use of this hazard rating system. You should be familiar with the hazard communication programs applicable to your workplace.

RECOMMENDED USES AND RESTRICTIONS

Intended as a heat transfer fluid for closed-loop systems.
Dow recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with Dow's Stated use, please contact Dow's Customer Information Group at 1-800-258-2436 (U.S.) or 1-800-331-6451 (Canada) for more information.

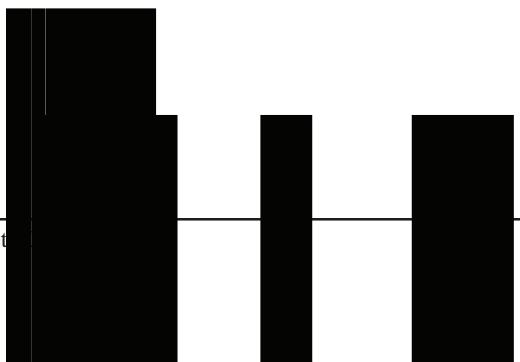
REVISION

Version: 4.1
Revision: 05/09/2002
Most recent revision(s) are noted by the bold, double bars in the left-hand margin throughout this document.

LEGEND

Bacteria/NA	Non Acclimated Bacteria
F	Fire
H	Health
IHG	Industrial Hygiene Guidelines
N/A	Not available
NFPA	National Fire Protection Association
O	Oxidizer
R	Reactivity
TS	Trade secret
VOL/VOL	Volume/Volume
W	Water reactive
W/W	Weight/Weight

NOTICE: Dow urges each customer or recipient of this MSDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this MSDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given., Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that its activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of Dow, it is the buyer's/user's duty to determine the condition necessary for the safe use of this product., Due to the proliferation of sources for information such as manufacturer-specific MSDSs, Dow is not and cannot be responsible for MSDSs obtained from any source other than Dow. If you have obtained a Dow MSDS from a non-Dow source or if you are not sure that a Dow MSDS is current, please contact Dow for the most current version.



Introduction

Operating Features

Danger! It is very important that you read and understand this manual before operating the reel! Failure to follow the procedures and cautions in this manual could lead to injury or possible death!

The DRYAIR hose reel's primary purpose is dispense and collect fluid circulation hose on job sites…primarily with respect to ground thaw and/or concrete cure operations.

The hose reel includes the following controls

- Spool directional controls
- Momentary foot switch for Load or Unload application.
- The drive is always engaged and braking controls are automatic. Therefore, there are no brakes to engage or disengage

hose reel overview

Drive Features & Power Requirements

- The reel can be run off a 115VAC, 15 amp circuit.
- Reel power and directional control is handled through two toggle switches. One controls Power - On/Off, the other controls the Mode - Load/Unload.
- The reel motor is a single phase 3/4 horse electric motor which produces a reel speed of 18 RPM.
- Drive and motor protection against inertial forces is provided by an adjustable torque-limiter clutch located between the motor/gear box and the reel spool. The torque limiter clutch provides quick braking action and a smooth interface with the spool's high inertial forces.

Reel Capacities

- The HR2250 Hose Reel comes with a 1500 feet hose packages of 3/4" hose (4 hoses x 375'=1500'). The HR2250 Hose Reel is designed to carry up to 2250 feet so that 5 (5 hoses x 375'=1875') and 6 (6 hoses x 375'=2250') hose pachages are also available upon request.

Transportation & Storage

- The reel can be transported by common carrier. The reel can be loaded using a forklift (accessible on 2 sides - front and back).
- A transport trailer is also available with a heat unit.
- As the reel is remote and not connected to the heating system, it can be stored out of the way or off the site when it is not needed.
- A tarp cover is provided to ensure weather and UV protection for the fluid circulation hose.

Setup/Operation

Danger! ***It is very important that you read and understand this section before operating the hose reel! Failure to follow the procedures and cautions in this manual could lead to injury or possible death!***

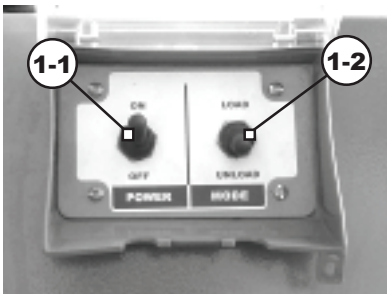
Manual Controls

The Hose Reel has a manual method of controlling the spool rotation "UNLOAD/LOAD" and a general ON/OFF power switch.

Caution! When NOT operating the reel, put the reel speed toggle switch (1-1) in the "Off" position to prevent accidental activation and possible injury. When the hose reel is to be left unsupervised, the power cord should be unplugged from the power supply.

Reel Power

Power is present when the power switch (1-1) is in the "ON" position. By connecting the foot switch you can load or unload hose by depressing the foot switch (1-2) which is momentary (will only operate when depressed).



1 - power & mode toggle switches

Reel Direction Modes

Mode 1 - UNLOAD
Mode 2 - LOAD

Caution! Take care not to allow your hands, feet or clothing to become trapped by any of the reel's moving mechanisms.

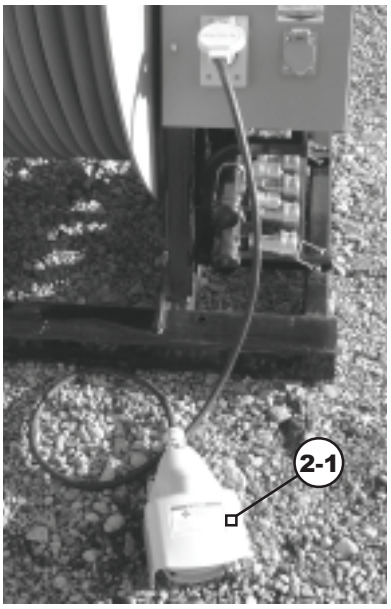
Mode 1 - "UNLOAD"

- The UNLOAD mode is acheived with the mode toggle switch (1-2) in the UNLOAD position.
- The foot switch (2-1) is momentary and will only operate when it is depressed.

Mode 2 - "LOAD"

- The LOAD mode is acheived with the mode toggle switch (1-2) in the LOAD position.
- The foot switch (2-1) is momentary and will only operate when it is depressed.
- The hose must be directed manually into position on the hose reel.

Note: To eliminate initial clutch slippage when loading hose, one loop of hose should be left slack prior to initiating hose loading.



2 - Foot switch

Mechanical Drive Components

Access to the internal mechanical drive components is through the access door. This door must be removed.

Electric Motor

- The electric motor used to drive the reel is manufactured by Marathon Electric.
- No regular maintenance is required.
- Low temperature manual reset thermal protector.
- Totally enclosed and fully gasketed construction for dirty environments.
- Make sure that, during operation or storage, the motor is not in prolonged contact with moisture.
- Refer to the chart "*Table 1- Electric motor features & data",* below for motor data.

1 - Access door

PRODUCT FEATURE - ENCLOSED HIGH TORQUE MOTOR			
Model Number:	56C17F5913	Phase:	1
HP:	3/4	Mult. Symb.	F1
RPM:	1725	F.L. Amps	11/5.4-5.5
Volts:	115/208-230	Wght. Lbs.	30
Frame:	56C	"C" Dim.	12.32
Overload:	MANUAL	Foot Notes:	2
Mounting:	C-FACE	S.F.:	1.15

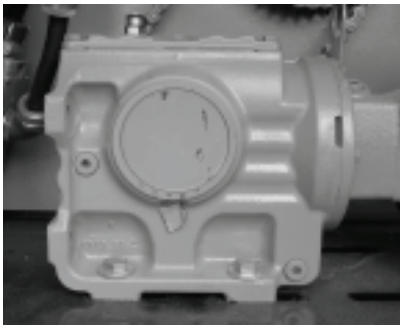
Table 1 - Electric motor features & data

2 - Marathon electric motor

Gear Box

Gear box specifications

- HUB CITY - Poweratio 2000, Model HW2042ER (Assy #: 0251-00534)
- Modified helical worm reducer
- 102:1 gear reduction
- 5/8" input shaft size
- 1" output shaft



3 - Hub City gear box

CAUTION

Do not operate the unit without ensuring it contains the correct amount of oil. Do not overfill or underfill with oil. Injury to personnel, unit, or other equipment may result.

Oil should be changed with greater frequency if unit is used in severe environment (dusty or high humidity).

WARNING

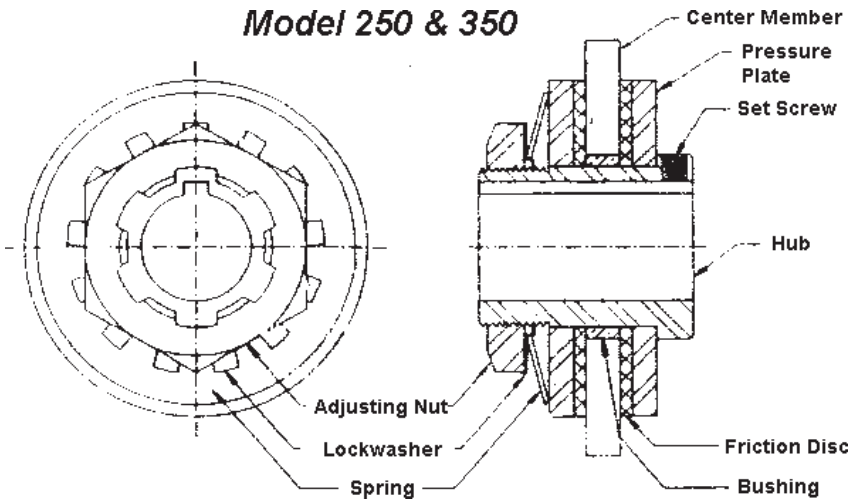
Oil, housing, and other components can reach high temperatures during operation, and can cause severe burns. Use extreme care when removing lubrication plugs and vents while servicing the unit.

See "Maintenance - Gear Box" section of the operators manual for Hub City Gear Box oil filling procedures, service & maintenance.

1. Torque Limiter Clutch

- The Torque limiter protects the drive line from damage due to overload conditions. The driven center member slips on non-asbestos friction discs during overload situations in the drive line.
- Torque Ratings
  GLI Model 350 w/ two springs
  - minimum: 60 lb.-ft.
  - maximum: 190 lb.-ft.

  Please note that the torque ratings are estimates. Actual torque capacity may vary significantly depending on many factors. Field conditions such as oil, humidity, water and temperature as well as the frequency and duration of slippage all affect torque capacity.



Although the torque limiter clutch is factory set at Dryair, periodic adjustment may be required. It is recommended the torque setting of the clutch be checked twice per season (see "Maintenance" section). With prolonged use, the two friction disks, located on either side of the A-plate sprocket, will eventually show wear.

- It is important that the torque limiter clutch is adjusted properly. If the clutch slips too easily, the spool will take too long to stop and hose will pile up on the reel. If the clutch does not slip at all, the protection on the Altivar drive will take over and the spool will again take too long to stop.

Note: A visual check may be required to confirm whether it is the clutch that is slipping or the motor.

See "Maintenance - Torque limiter adjustment" section of the operators manual for Torque Adjustment & Run-In Procedure.

Maintenance

Danger! ***It is very important that you read and understand this section before operating the hose reel! Failure to follow the procedures and cautions in this manual could lead to injury or possible death!***

Precautions

Electric shock will result in death or serious injury.

- The user is responsible for conforming to all applicable code requirements with respect to grounding all equipment.
- Many parts in this drive controller, including printed wiring boards, operate at line voltage. DO NOT TOUCH. Use only electrically insulated tools.
- DO NOT touch unshielded components or terminal strip screw connections with voltage present.
- Install and close all covers before applying power or starting and stopping the hose reel.
- Before servicing:
  - -Disconnect all power.
  - -Place a "DO NOT TURN ON" label on the drive controller disconnect.
  - -Lock the disconnect in the open position.
- Disconnect all power including external control power that may be present servicing the drive controller. WAIT 15 MINUTES for the DC bus capacitors to discharge. Then follow the DC bus voltage measurement procedure beginning on page 5 of the "ALTIVAR 11 Adjustable Speed Drive Controllers Start-up Guide" to verify that the DC voltage is less than 45 Vdc. The drive controller LEDs are not accurate indicators of the absence of DC bus voltage.

Auto Resets

The drive controller is factory set and will reload its factory default settings each time the AC line is connected. It will also automatically start when recovering from a series of different faults.

Manual Resets

ELECTRIC MOTOR

Gound Fault

If a fault occurs due to a prolonged overload, overvoltage, undervoltage or phase failure, the control must be manually restarted. The control can be restarted by:

1) Disconnect AC power and wait for at least **30 seconds** for drive controller to power down.
2) Reconnect the AC power. This will re-initiate the factory default settings.

Electric Motor

- The electric motor used to drive the reel is a Marathon.
- No regular maintenance is required.
- Make sure that the motor is not in prolonged contact with moisture during operation or storage.

5 - Marathon electric motor

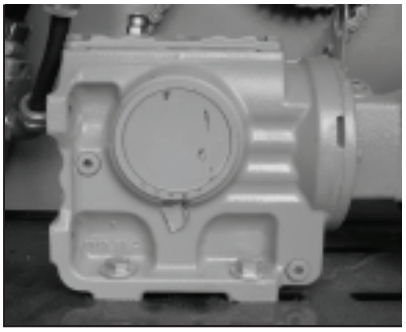
Gear Box

Maintenance & Operation

WARNING

Oil, housing, and other components can reach high temperatures during operation, and can cause severe burns. Use extreme care when removing lubrication plugs and vents while servicing the unit.

- Do not operate the unit without making sure it contains the correct amount of oil. Do not overfill or underfill with oil, or injury to personnel, unit, or other equipment may result.
- For proper operation in subzero conditions, it is mandatory that the following oil be used:
  "***Spartan EP 320 industrial gear oil"***
  …any other gear oil will void warranty!



6 - gear box

Oil Filling Procedure

- Remove Fill (#-1) and Breather Plug (#-2).
- Clean threads on the removed plugs and the plug holes with degreaser.
- Fill gear box with the recommended lubricant (see above) to a level near the center line of the uppermost horizontal shaft or until lubricant comes out of the oil level plug hole.
- Install plugs secure in gear case.

Break-In Period

After the first 100 hours of operation, drain out initial oil, flush out the gear case with an approved non-flammable, non-toxic solvent, such as Whitmore's Flushing Oil (#06802030) or Medallion Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 2500 operating hours or every 6 months - whichever occurs first.

Note: Oil should be changed with greater frequency if unit is used in severe environments (dust or high humidity).

Torque limiter adjustment

- Although the torque limiter clutch is factory (Dryair) set, periodic adjustment may be required. It is recommended tha torque setting of the clutch be checked twice a season. With prolonged use, the two friction disks, located on either side of the A-plate sprocket, will eventually show wear.
- It is important that the torque limiter clutch is adjusted properly. If the clutch slips too easily, the spool will take too long to stop and hose will pile up on the reel. If the clutch does not slip at all, the protection on the Altivar 11 drive will take over and the spool will again take too long to stop.

Note: A visual check may be required to confirm whether it is the clutch that is slipping or whether it is the Altivar 11 drive that is automatically adjusting in an overload situation.

- Check that the clutch is adjusted properly with the following procedure:

Physical check

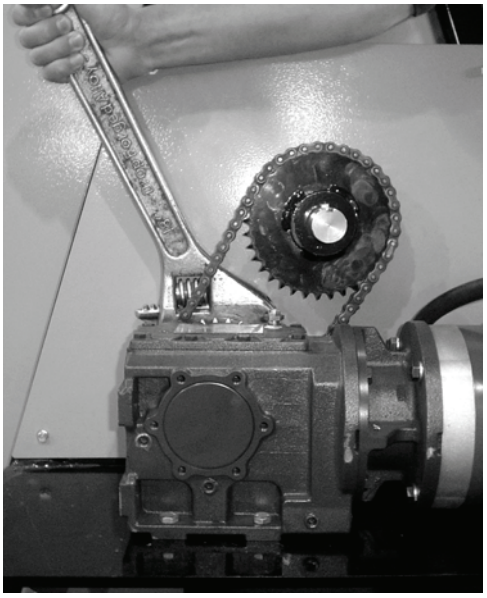
- With no power being applied to the reel, grip the edge of the spool plate and apply full upward force, making sure that you are lifting with your legs and not your back.
- You should be able to cause the clutch to just slip with full lifting force.
- If the clutch does not slip or slips too easily, refer to the "torque adjust procedure", below.

Torque adjust procedure

- Insure that the adjusting nut is in a finger tight position.
- If the adjustment nut is tighter than finger tight, loosen and complete previous step.
- Match mark the adjusting nut with the hub. Using a torque wrench tighten the adjusting nut to 90ft*lb.

After the break-away torque is set, bend the tabs of the lock washer over the hex flats of the adjusting nut.

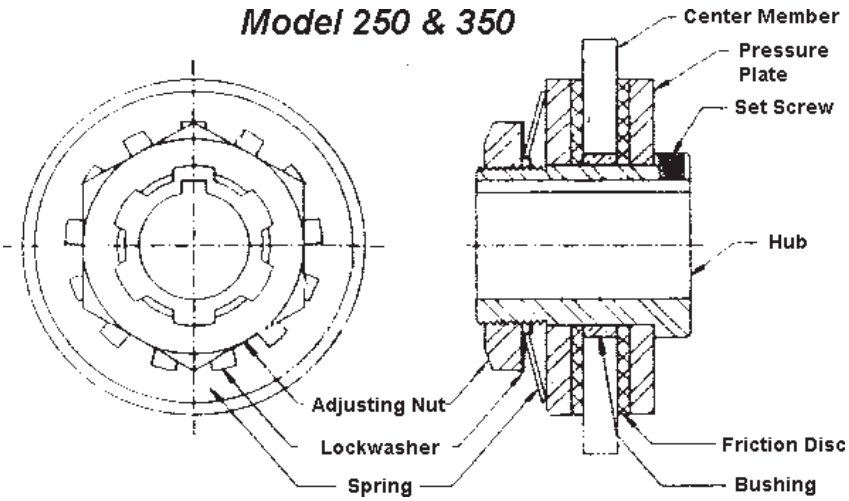
Note: The torque limiter clutch nut requires a reasonable amount of force to adjust. Use a torque wrench that provides you with at least 18" of leverage.



7 - torque limiter adjustment

Run-in procedure

- If the torque has been taken apart and reassembled or friction disks have been changed, it is recommended that the clutch be "run in" by "slipping" the center member (sprocket).
- Insure that the adjusting nut is in a finger tight position.
- Match mark the adjusting nut and hub. Advance the adjusting nut ¼ turn from finger tight.
- Slip the torque limiter sprocket for 8 minutes at full RPM.
- Refer back to the "Torque adjust procedure" for final readjustment.



8 - torque limiter assembly